

Claims

1. A lamp (10), comprising at least one base (11) for connection to a luminaire, having a curved, in particular parabolic, essentially rotationally symmetrical reflector (13), a light source being arranged in the focal point (32) or focal point region of said reflector (13) for the purpose of producing a directional, for example narrowly emitting light distribution of the lamp (10), the reflector having a reflector opening (15), which provides a light exit plane (E) of the lamp (10), characterized in that the light source is formed by at least one LED (20, 20a, 20b, 20c) and is arranged spaced apart from the inside (14) of the reflector, and in that at least one functional element of the LED, in particular at least one voltage supply line (21a, 21b, 21c, 21d) of the LED and/or at least one heat sink (29, 30a, 30b, 30c, 30d) for the LED, at least partially extends essentially along the light exit plane (E) or is arranged at least partially on that side of the light exit plane (E) which faces away from the reflector (13).
2. The lamp as claimed in claim 1, characterized in that the functional element (21a, 21b, 21c, 21d, 29, 30a, 30b, 30c, 30d) protrudes at least partially out of the reflector opening (15).
3. The lamp as claimed in claim 1 or 2, characterized in that the LED has at least one associated voltage supply line (21a, 21b, 21c, 21d), which extends essentially along the light exit plane (E).
4. The lamp as claimed in claim 3, characterized in that two voltage supply lines (21a, 21b) are provided for the

LED which extend essentially diametrically with respect to one another (Figures 3 and 5).

5. The lamp as claimed in claim 3, characterized in that three voltage supply lines (21a, 21b, 21c) for the LED, in particular for an LED unit (19) having at least two LEDs (20a, 20b), are provided, of which in each case two enclose an angle of approximately  $120^\circ$  along the light exit plane (E) (Figure 6).

6. The lamp as claimed in claim 3, characterized in that four voltage supply lines (21a, 21b, 21c, 21d) for the LED, in particular for an LED unit having at least three LEDs, are provided, of which in each case two enclose an angle of approximately  $90^\circ$  along the light exit plane (E) (Figure 7).

7. The lamp as claimed in one of the preceding claims, characterized in that at least one voltage supply line (21a, 21b, 21c, 21d) is provided which engages around one edge of the reflector opening (15).

8. The lamp as claimed in one of the preceding claims, characterized in that a transparent cover element (17) is associated with the reflector (13) and closes the reflector opening (15).

9. The lamp as claimed in claim 8, characterized in that the cover element (17) is essentially in the form of a circular disk.

10. The lamp as claimed in claim 8 or 9, characterized in that the cover element (17) has a central opening (18) for accommodating the LED (19, 20, 20a, 20b, 20c).

11. The lamp as claimed in one of claims 8 to 10,  
characterized in that at least one voltage supply line (21a,  
21b, 21c, 21d) is provided which is arranged on that side of  
the cover element (17) which faces away from the reflector  
5 (13).

12. The lamp as claimed in one of the preceding claims,  
characterized in that a grip part (30a, 30b, 30c, 30d) is  
provided on that side of the light exit plane (E) which faces  
10 away from the reflector (13).

13. The lamp as claimed in one of the preceding claims,  
characterized in that the LED (20a, 20b, 20c, 20d, 20e) has at  
least one associated heat sink (29, 30a, 30b, 30c, 30d) for  
15 heat dissipation purposes.

14. The lamp as claimed in claim 13, characterized in that the  
heat sink (29, 30a, 30b, 30c, 30d) is spaced apart from the  
apex (27) of the reflector (13).

20 15. The lamp as claimed in claim 13 or 14, characterized in  
that the heat sink (29, 30a, 30b, 30c, 30d) is arranged on that  
side of the light exit plane (E) and/or LED which faces away  
from the reflector (13).

25 16. The lamp as claimed in one of claims 13 to 15,  
characterized in that the heat sink has a compact, in  
particular solid cooling block (29).

30 17. The lamp as claimed in claim 16, characterized in that the  
cooling block (29) is arranged essentially in the region of a  
longitudinal center axis (L) of the reflector (13).

18. The lamp as claimed in one of claims 13 to 17, characterized in that the heat sink comprises a cooling plate (30a, 30b, 30c, 30d), which extends essentially along the light exit plane (E).

5

19. The lamp as claimed in claim 18, characterized in that the cooling plate (30a, 30b, 30c, 30d) extends from the LED (20, 20a, 20b, 20c, 20d, 20e) essentially up to one edge (16) of the reflector opening (15).

10

20. The lamp as claimed in one of the preceding claims, characterized in that the reflector (13) is essentially continuous.

15

21. The lamp as claimed in one of the preceding claims, characterized in that the reflector (13) is free of apertures in the region of its apex (27).

20

25

30

35